I. IN THE CLAIMS:

Please cancel claims 24 – 44.

Please add the following claims:

45. A kit for generating a perioperative genomic profile for a subject, comprising:

    a)   reagents capable of detecting the presence of variant alleles of two or more genes selected from the group consisting of *BChE, CYP2D6, F5, F2, CACNAIS, MTHFR, MTR, MTRR, CBS, TNFα* and *TNFβ*; and

    b)   instructions for using said kit for generating said perioperative genomic profile for said subject.

46. The kit of Claim 45, further comprising a computer readable medium comprising instructions for using said kit for generating said perioperative genomic profile for said subject.

47. The kit of Claim 46, further comprising a computer readable medium comprising computer instructions which direct a processor to analyze data derived from use of said reagents.

48. The kit of Claim 45, wherein said instructions comprise a decision tree that, based on at least the presence of variant alleles of two or more genes selected from the group consisting of *BChE, CYP2D6, F5, F2, CACNAIS, MTHFR, MTR, MTRR, CBS, TNFα* and *TNFβ*, directs a user to a specific perioperative clinical pathway for said subject.

49. The kit of Claim 45, wherein said instructions describe how said perioperative genomic profile is analyzed in selecting an appropriate general anesthesia treatment course of action.

50. The kit of Claim 49, wherein said general anesthesia is an inhalational treatment course of action.

51. The kit of Claim 49, wherein said general anesthesia is an intravenous treatment course of action.

52. The kit of Claim 49, wherein said general anesthesia is a combined inhalational and intravenous treatment course of action.

53. The kit of Claim 45, wherein said instructions describe how said perioperative genomic profile is analyzed in selecting an appropriate regional anesthesia treatment course of action.

54. The kit of Claim 45, wherein said instructions describe how said perioperative genomic profile is analyzed in selecting an appropriate combined regional and general treatment course of action.

55. The kit of Claim 45, wherein said instructions describe how said perioperative genomic profile is analyzed in selecting an appropriate non-invasive surgery treatment course of action.

56. The kit of Claim 45, wherein said instructions describe how said perioperative genomic profile is analyzed in selecting an appropriate invasive surgery treatment course of action.

57. The kit of Claim 45, wherein said instructions describe how said perioperative genomic profile is analyzed in selecting an appropriate anesthesia treatment course of action during a medical procedure.

58. The kit of Claim 45, wherein said instructions describe how said

perioperative genomic profile is analyzed in selecting appropriate dosages of analgesic compounds.

59.   The kit of Claim 54, wherein said instructions describe how said perioperative genomic profile is analyzed to increase the dosage of analgesic compounds metabolized by CYP2D6.

60.   The kit of Claim 54, wherein said instructions describe how said perioperative genomic profile is analyzed to decrease the dosage of analgesic compounds metabolized by CYP2D6.

61.   The kit of Claim 45, wherein said instructions describe how said perioperative genomic profile is analyzed in selecting appropriate prophylaxis for thrombosis.

62.   The kit of Claim 45, wherein said instructions describe how said perioperative genomic profile is analyzed to increase prophylaxis for thrombosis mediated by variant alleles of *F5, F2, MTHFR, MTR, MTRR,* and *CBS.*

63.   The kit of Claim 45, wherein said instructions describe how said perioperative genomic profile is analyzed to decrease prophylaxis for thrombosis mediated by variant alleles of *F5, F2, MTHFR, MTR, MTRR,* and *CBS.*

64.   The kit of Claim 45, wherein said instructions describe how said perioperative genomic profile is analyzed in selecting appropriate monitoring procedures.

65.   The kit of Claim 45, wherein said instructions describe how said perioperative genomic profile is analyzed in selecting pre-operative phenotypic tests and consultations.

66.   The kit of Claim 45, wherein said instructions describe how said

perioperative genomic profile is analyzed in providing a prognosis after an anesthesia treatment course of action.

67.   The kit of Claim 45, wherein said instructions describe how said perioperative genomic profile is analyzed in providing a prognosis after a surgical treatment course of action.

68.   The kit of Claim 45, wherein said instructions describe how said perioperative genomic profile is analyzed in selecting an appropriate post-operative treatment course of action.

69.   A system for generating a perioperative genomic profile for a subject comprising a computer readable medium configured to analyze data from two or more genes selected from the group consisting of *BChE, CYP2D6, F5, F2, CACNAIS, MTHFR, MTR, MTRR, CBS, TNFα* and *TNFβ*; and configured to generate a report to physicians for carrying out a perioperative course of action based on results from the operation of a kit for generating a perioperative genomic profile.

70.   A method for generating the kit of Claim 45, comprising

a)   selecting variant alleles of two or more genes based on criteria of analytical validity, clinical validity, clinical utility or commercial value; and

b)   selecting variant alleles of two or more genes based on categories of pharmacogenetic risk, diagnostic utility, differential diagnosis, specific surgical procedure, subject group, subject haplotype, outcome predictors, or unique patient identifier; and

c)   assessing markers meeting said criteria and categories for suitability of inclusion in generating said perioperative genomic profile.